

HOW TO: MAKE A DIGITAL PHENOLOGY TIMELINE

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<http://lpsc642.ahnjune.com/>

WHY PHENOLOGY?

Phenology - the study of recurring plant and animal life cycle stages and their relationship to climate variations -can be a great way for students to collect and interpret data, become familiar with local habitats, and bring learning beyond the classroom. It can also help build critical skills in math and science.

Some examples of phenology data students can collect include in their local environment:

- Return of migratory bird species
- Initial leafing of native plants
- First flowering of deciduous trees
- Emergence of insect species

Collecting these types of data along with seasonal temperature and rainfall information can help students make predictions about the relationships between living things and local climate.

Difficulty:
Moderate

Time:
Recommended daily observations for 2-3 months (observer duties may be shared by a whole class)

Who:
Teacher + students working together; or individual students working on their own timelines

Materials:
Digital cameras, camera phones, or iPads; computer with Internet access; optional – outdoor thermometers and rain gauges

STEP 1

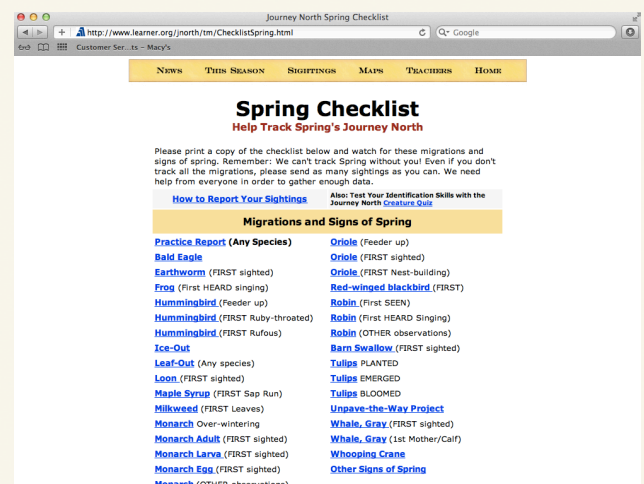
Decide which data you will observe and record. Some examples could include:

- arrivals of migratory birds
- first leaves on tree species
- first spring flowers on native plant species

Consider using a classroom resource like phenology checklists from Journey North to help. Also decide the duration of your data collection (e.g. March-May).

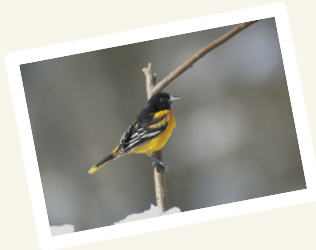
STEP 2

Research the species you will observe. For example, if you are observing bird species, research which birds you are likely to see in your region and when they typically arrive. If you are observing flowering plants, identify the plant species in your neighborhood. Consider using a web-based field guide or app to help with species identification.



STEP 3

Take digital photographs* to document phenological events as they occur. Also consider documenting daily temperature and rainfall data for later analysis.



STEP 4

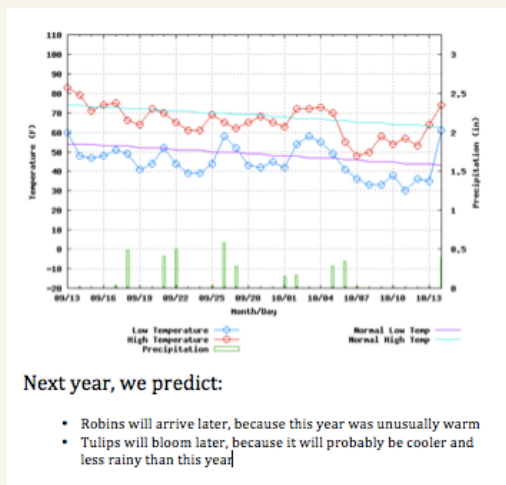
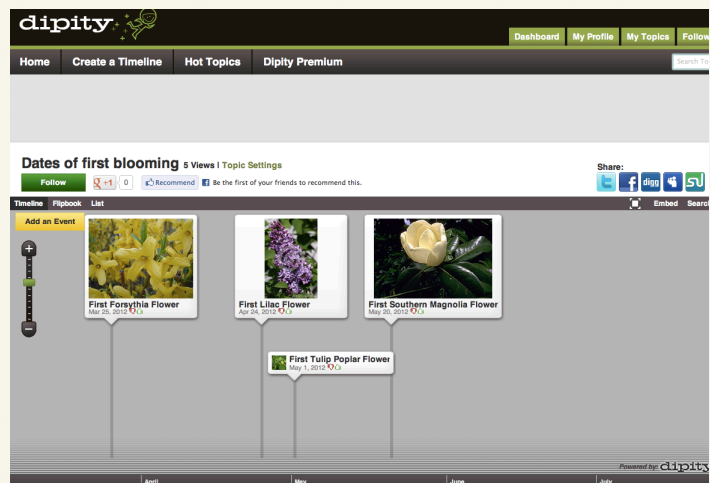
Sign up for a web-based timeline software, like Dipity (www.dipity.com).

STEP 5

Take digital photographs to document phenological events as they occur. Also consider documenting daily temperature and rainfall data for later analysis.

STEP 6

As you collect them, upload your phenology photos to your timeline. Be sure to include the dates and times the photos were taken.



STEP 7

Make predictions about what will happen next year if climate conditions are similar. What about if temperatures are warmer? Cooler? What if conditions are wetter? Drier?

STEP 8

Archive your timeline and predictions for comparison by next year's observers!

*Wildlife photo credits: Monarch Butterfly on New England Aster by [Greg Thompson/USFWS](#), Male Baltimore Oriole by [David Brezinski/USFWS](#), Columbine by [Kent Mason/USFWS](#), Juvenile Bog Turtle by [Rosie Walunas/USFWS](#)